
New Combinations in *Pleuropogon* (Poaceae)

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ABSTRACT. *Pleuropogon* Robert Brown subg. *Lophochlaenus* (C. G. Nees von Esenbeck) But is proposed to accommodate all species in the genus other than *P. sabinii*. *Pleuropogon davyi* Benson is reduced to *P. californicus* var. *davyi* (Benson) But.

Two nomenclatural changes are proposed here to prepare the way for a treatment of *Pleuropogon* Robert Brown for the forthcoming *Manual of North American Grasses*.

Pleuropogon Robert Brown has been generally regarded as a small genus of 4–6 species (Benson, 1941; Howell, 1946; Chase in Hitchcock, 1951; Clayton & Renvoize, 1986). These species are hydrophilous grasses found growing in vernal pools, marshy grasslands, meadows, and other wet places. They are easily distinguishable from other grasses by the following combination of characters: culms and leaves soft; sheaths closed; raceme terminal; spikelets linear, with 5–20(–30) florets, oriented toward one direction giving the raceme the appearance of a semaphore; lemmas awnless or awned, with 7(–9) veins, the veins not convergent at the scarious apex; paleal keels winged and bearing 1 or 2 awns or a triangular appendage; lodicules 2, completely fused to form a single block.

The type species of *Pleuropogon*, *P. sabinii* Robert Brown, has an arctic-circumboreal distribution from Alaska to arctic Canada, Greenland, Spitsbergen, Franz Josef Land, Novaya Zemlya, Taymyr, eastern Siberia, and also in alpine regions of the Altai mountains. It has small chromosomes and a somatic chromosome number of 40 (Holmer, 1952; Jorgensen et al., 1958; Löve & Ritchie, 1966; Hedberg, 1967; Zhukova, 1969; Löve & Löve, 1978), 41 (Löve & Löve, 1978), or 42 (Bowden, 1960; Mosquin & Hayley, 1966). The other species in the genus, however, are restricted to the Pacific Coast of North America, from southern British Columbia to central California; they have larger chromosomes and somatic chromosome numbers ranging from 16 to 18 and 36 (Myers, 1947; Löve & Löve, 1978). It was mainly because of their differences in distribution pattern, chromosome size, and basic

chromosome numbers that Stebbins (in Jorgensen et al., 1958), Tateoka (1965), Tzvelev (1976, 1989), Löve & Löve (1978, 1980), and But (1986) either made or adopted the suggestion that the western cordilleran species should be transferred to *Lophochlaena* C. G. Nees von Esenbeck. This separation of the species into two major groups is further supported by the absence in *P. sabinii* of dwarf short-cells in the glume epidermis and of square, round-prickled cells in palea epidermis (But, 1977). However, a review of all morphological characters in the two groups of grasses showed that it would be more appropriate to retain the five species and one variety recognized here in two subgenera within *Pleuropogon*.

Pleuropogon* Robert Brown subg. *Pleuropogon
Chlor. Melv. 226. 1823. TYPE: *Pleuropogon sabinii* Robert Brown.

This subgenus contains only the type species, *P. sabinii*.

***Pleuropogon sabinii* Robert Brown**, Chlor. Melv. 226. 1823. *Pleuropogon sabinii* var. α Robert Brown, Chlor. Melv. 227. 1823. *Pleuropogon sabinii* var. *elatio* Hooker, Fl. Bor. Amer. 2: 249. 1840. TYPE: Canada. Melville Island: Northwest Territories, *Parry* (lectotype, selected here, BM, plant in lower right-hand corner).

Pleuropogon sabinii var. β Robert Brown, Chlor. Melv. 227. 1823. *Pleuropogon sabinii* var. *humilior* Hooker, Fl. Bor. Amer. 2: 249. 1840. TYPE: Canada. Melville Island: Northwest Territories, *Parry* (lectotype, selected here, BM, plant in upper left-hand corner).

Pleuropogon sabinii f. *aquaticus* Simmons, Rep. 2d Norwegian Arct. Exp. Fram. no. 2, 170. 1906. TYPE: Canada. Ellesmere Island: Fram Fjord, "in lacubus, rivulis etc.," 26 Aug. 1899, *Simmons 1600* (holotype, O; isotypes, C, CAN, K, LE, NY, S).

Pleuropogon sabinii f. *terrestris* Simmons, Rep. 2d Norwegian Arct. Exp. Fram. no. 2, 170. 1906. TYPE: Canada. Ellesmere Island: Fram Fjord, "in rivulis siccatis," 26 Aug. 1899, *Simmons 1666* (holotype, O; isotypes, BM, C, GH, NY, S).

Pleuropogon Robert Brown subg. **Lophochlaenus** (C. G. Nees von Esenbeck) But, comb. et stat. nov. *Lophochlaena* C. G. Nees von Esenbeck, Ann. Nat. Hist. ser. 1, 1: 283. 1838. TYPE: *Pleuropogon californicus* (C. G. Nees von Esenbeck) Bentham ex Vasey = *Lophochlaena californica* C. G. Nees von Esenbeck.

Four species are recognized in this subgenus: *P. californicus* (C. G. Nees von Esenbeck) Bentham ex Vasey, *P. oregonus* Chase, *P. hooverianus* (Benson) J. T. Howell, and *P. refractus* (A. Gray) Bentham ex Vasey. *Pleuropogon californicus* is further divided into the following two varieties:

Pleuropogon californicus (C. G. Nees von Esenbeck) Bentham ex Vasey var. **californicus**, Grasses U.S. 40. 1883. TYPE: U.S.A. California: 1833, *Douglas s.n.* (neotype, selected here, GH; isoneotypes, BM, K, NY).

Pleuropogon douglasii Trinius ex Steudel, Nom. Bot. ed. 2, 2: 355. 1841. nom. nud.; *Lepitoma brevifolia* Torrey ex Steudel, Nom. Bot. ed. 2, 2: 355. 1841. pro. syn.

Pleuropogon californicus (C. G. Nees von Esenbeck) Bentham ex Vasey var. **davyi** (Benson) But, comb. nov. Basionym: *Pleuropogon davyi* Benson, Amer. J. Bot. 28: 360. 1941. *Lophochlaena californica* var. *davyi* (Benson) A. Löve & D. Löve, Taxon 27: 375. 1978. TYPE: U.S.A. California: Lake County, 1 mi. N of Kelseyville, 14 June 1932, *Benson 3666* (holotype, POM; isotypes, DS, US, POM).

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